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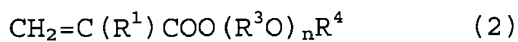
wherein  $R^1$  is a hydrogen atom or an alkyl group having 1 to 5 carbon atoms; and  $R^2$  is an alkyl group having 1 to 20 carbon atoms.

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A2

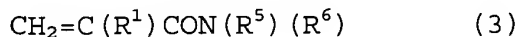
4. (Amended) The water-based ink according to any one of claims 1 to 3, wherein the graft copolymer has a nonionic polymer side chain (R) comprising:

(I) a polymer made of at least one monomer represented by the formula (2):



wherein  $R^1$ ,  $R^3$  and  $R^4$  are as defined above; and  $n$  is a number of 1 to 60;

(II) a polymer made of at least one monomer represented by the formula (3):



wherein  $R^1$  is as defined above; and each of  $R^5$  and  $R^6$  is independently a hydrogen atom or an alkyl group having 1 to 5 carbon atoms;

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(III) a copolymer made of at least one monomer represented by the formula (2) and at least one monomer represented by the formula (3); or

(IV) a group represented by the formula (4):



wherein  $R^3$  and  $R^4$  are as defined above; and  $m$  is a number of 3 to 60.

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A3

6. (Amended) The water-based ink according to claim 5, wherein the polymer (S) is a polymer having an initiator structure prepared by converting to an initiator structure an initiator precursor structure of a polymer (T) having an initiator precursor structure which is convertible to an initiator structure, and the polymer (T) is a homopolymer made of a monomer (n) having an initiator precursor structure, or a copolymer of the monomer (n) with a monomer (o) copolymerizable with the monomer (n).

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Please add the following claims:

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A4

10. (New) The water-based ink according to claim 1, wherein the content of the colorant of said coloring material (A) is 1 to 50% by weight of said coloring material (A).

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11. (New) The water-based ink according to claim 1, wherein said acrylic polymer side chain (P) has a molecular weight of 300 to 20,000.

12. (New) The water-based ink according to claim 1, wherein said acrylic polymer side chain (P) is a polylauryl methacrylate side chain or a polyisobutyl methacrylate side chain.

13. (New) The water-based ink according to claim 1, wherein the content of said acrylic polymer side chain (P) is 10 to 35% by weight of said graft copolymer.

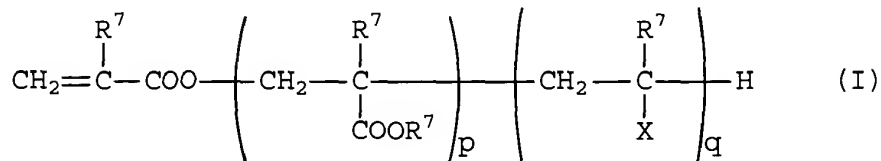
14. (New) The water-based ink according to claim 4, wherein said nonionic polymer side chain (R) has a molecular weight of 300 to 10,000.

15. (New) The water-based ink according to claim 4, wherein the content of said nonionic polymer side chain (R) is 10 to 35% by weight of said graft copolymer.

16. (New) The water-based ink according to claim 2, wherein the number-average molecular weight of said (meth)acrylate macromer (a) is from 1,000 to 10,000.

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17. (New) The water-based ink according to claim 2, wherein said (meth)acrylate macromer (a) is a compound represented by formula (I):



wherein each of  $\text{R}^7$  is independently a hydrogen atom or a hydrocarbon group having 1 to 12 carbon atoms; X is at least one group selected from the group consisting of  $-\text{COOR}^7$  ( $\text{R}^7$  is defined as above), an aromatic group having 6 to 12 carbon atoms, nitrile group and  $-\text{OCOCH}_3$ ; and each of p and q is an integer satisfying the relationship p/q (molar ratio) of 6/4 to 10/0 and a number-average molecular weight of 1000 to 10,000.

18. (New) The water-based ink according to claim 1, wherein the aqueous dispersion is an aqueous dispersion of polymer particles of the graft copolymer containing the coloring material.

19. (New) The water-based ink according to claim 1, wherein the graft copolymer is prepared by polymerizing a monomer having an amino group, diazoating the resulting polymer to introduce an azo initiator structure into the polymer, and polymerizing an acrylate monomer using the polymer as an initiator.

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20. (New) The water-based ink according to claim 1, wherein the graft copolymer is prepared by copolymerizing methacrylic acid chloride and a monomer copolymerizable with the methacrylic acid chloride, or copolymerizing an acid monomer and a monomer copolymerizable with the acid monomer; converting the acid group of the resulting graft copolymer to an acid chloride group with a chlorinating agent to give a polymer having an acid chloride group which is to be a main chain; treating the polymer with an alcohol peroxide to convert the acid chloride group to peroxide initiator group; and polymerizing the resulting polymer with an acrylate monomer.

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